at near-space altitudes, to the maximum extent practicable, as part of a diverse set of capabilities to effectively and efficiently meet the goals of the Administration.

SEC. 815. PRESIDENT'S SPACE ADVISORY BOARD.

Section 121 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611; 51 U.S.C. 20111 note) is amended—

(1) in the section heading, by striking ''**USERS' ADVISORY GROUP**'' and inserting ''**PRESIDENT'S SPACE ADVISORY BOARD**''; and

(2) by striking ''Users' Advisory Group'' each place it appears and inserting ''President's Space Advisory Board.''

SEC. 816. INITIATIVE ON TECHNOLOGIES FOR NOISE AND EMISSIONS REDUCTIONS.

(a) INITIATIVE REQUIRED.—Section 40112 of title 51, United States Code, is amended—

(1) by redesignating subsections (b) through (f) as subsections (c) through (g), respectively; and

(2) by inserting after subsection (a) the following new subsection (b):

''(b) TECHNOLOGIES FOR NOISE AND EMISSIONS REDUCTION.—

''(1) INITIATIVE REQUIRED.—The Administrator shall establish an initiative to build upon and accelerate previous or ongoing work to develop and demonstrate new technologies, including systems architecture, components, or integration of systems and airframe structures, in electric aircraft propulsion concepts that are capable of substantially reducing both emissions and noise from aircraft.

''(2) APPROACH.—In carrying out the initiative, the Administrator shall do the following:

''(A) Continue and expand work of the Administration on research, development, and demonstration of electric aircraft concepts, and the integration of such concepts.

''(B) To the extent practicable, work with multiple partners, including small businesses and new entrants, on research and development activities related to transport category aircraft.

''(C) Provide guidance to the Federal Aviation Administration on technologies developed and tested pursuant to the initiative.''.

(b) REPORTS.—Not later than 180 days after the date of the enactment of this Act, and annually thereafter as a part of the Administration's budget submission, the Administrator shall submit a report to the appropriate committee of Congress on the progress of the work under the initiative required by subsection (b) of section 40112 of title 51, United States Code (as amended by subsection (a) of this section), including an updated, anticipated timeframe for aircraft entering into service that produce 50 percent less noise and emissions than the highest performing aircraft in service as of December 31, 2019.

SEC. 817. REMEDIATION OF SITES CONTAMINATED WITH TRICHLOROETHYLENE.

(a) IDENTIFICATION OF SITES.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall identify sites of the Administration contaminated with trichloroethylene.

(b) REPORT REQUIRED.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report that includes—

(1) the recommendations of the Administrator for remediating the sites identified under subsection (a) during the 5-year period beginning on the date of the report; and

(2) an estimate of the financial resources necessary to implement those recommendations.

SEC. 818. REPORT ON MERITS AND OPTIONS FOR ESTABLISHING AN INSTITUTE RELATING TO SPACE RESOURCES.

(a) REPORT.—

(1) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on the merits of, and options for, establishing an institute relating to space resources to advance the objectives of NASA in maintaining United States preeminence in space described in paragraph (3).

(2) MATTERS TO BE INCLUDED.—The report required by paragraph (1) shall include an assessment by the Administrator as to whether—

(A) a virtual or physical institute relating to space resources is most cost effective and appropriate; and

(B) partnering with institutions of higher education and the aerospace industry, and the extractive industry as appropriate, would be effective in increasing information available to such an institute with respect to advancing the objectives described in paragraph (3).

(3) OBJECTIVES.—The objectives described in this paragraph are the following:

(A) Identifying, developing, and distributing space resources, including by encouraging the development of foundational science and technology.

(B) Reducing the technological risks associated with identifying, developing, and distributing space resources.

(C) Developing options for using space resources—

(i) to support current and future space architectures, programs, and missions; and

(ii) to enable architectures, programs, and missions that would not otherwise be possible.

(4) DEFINITIONS.—In this section:

(A) EXTRACTIVE INDUSTRY.—The term ''extractive industry'' means a company or individual involved in the process of extracting (including mining, quarrying, drilling, and dredging) space resources.

(B) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(C) SPACE RESOURCE.—

(i) IN GENERAL.—The term ''space resource'' means an abiotic resource in situ in outer space.

(ii) INCLUSIONS.—The term ''space resource'' includes a raw material, a natural material, and an energy source.

SEC. 819. REPORT ON ESTABLISHING CENTER OF EXCELLENCE FOR SPACE WEATHER TECHNOLOGY.

(a) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report assessing the potential benefits of establishing a NASA center of excellence for space weather technology.

(b) GEOGRAPHIC CONSIDERATIONS.—In the report required by subsection (a), the Administrator shall consider the benefits of establishing the center of excellence described in that subsection in a geographic area—

(1) in close proximity to—

(A) significant government-funded space weather research activities; and

(B) institutions of higher education; and

(2) where NASA may have been previously underrepresented.

SEC. 820. REVIEW ON PREFERENCE FOR DOMESTIC SUPPLIERS.

(a) SENSE OF CONGRESS.—It is the Sense of Congress that the Administration should, to the maximum extent practicable and with due consideration of foreign policy goals and obligations under Federal law—

(1) use domestic suppliers of goods and services; and

(2) ensure compliance with the Federal acquisition regulations, including subcontract flow-down provisions.

(b) REVIEW.—

(1) IN GENERAL.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall undertake a comprehensive review of the domestic supplier preferences of the Administration and the obligations of the Administration under the Federal acquisition regulations to ensure compliance, particularly with respect to Federal acquisition regulations provisions that apply to foreign-based subcontractors.

(2) ELEMENTS.—The review under paragraph (1) shall include—

(A) an assessment as to whether the Administration has provided funding for infrastructure of a foreign-owned company or State-sponsored entity in recent years; and

(B) a review of any impact such funding has had on domestic service providers.

(c) REPORT.—The Administrator shall submit to the appropriate committees of Congress a report on the results of the review.

SEC. 821. REPORT ON UTILIZATION OF COMMERCIAL SPACEPORTS LICENSED BY FEDERAL AVIATION ADMINISTRATION.

(a) IN GENERAL.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on the benefits of increased utilization of commercial spaceports licensed by the Federal Aviation Administration for NASA civil space missions and operations.

(b) ELEMENTS.—The report required by subsection (a) shall include the following:

(1) A description and assessment of current utilization of commercial spaceports licensed by the Federal Aviation Administration for NASA civil space missions and operations.

(2) A description and assessment of the benefits of increased utilization of such spaceports for such missions and operations.

(3) A description and assessment of the steps necessary to achieve increased utilization of such spaceports for such missions and operations.

SEC. 822. ACTIVE ORBITAL DEBRIS MITIGATION.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) orbital debris, particularly in low-Earth orbit, poses a hazard to NASA missions, particularly human spaceflight; and

(2) progress has been made on the development of guidelines for long-term space sustainability through the United Nations Committee on the Peaceful Uses of Outer Space.

(b) REQUIREMENTS.—The Administrator should—

(1) ensure the policies and standard practices of NASA meet or exceed international guidelines for spaceflight safety; and

(2) support the development of orbital debris mitigation technologies through continued research and development of concepts.

(c) REPORT TO CONGRESS.—Not later than 90 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on the status of implementing subsection (b).

SEC. 823. STUDY ON COMMERCIAL COMMUNICATIONS SERVICES.

(a) SENSE OF CONGRESS.—It is the sense of Congress that—

(1) enhancing the ability of researchers to conduct and interact with experiments while in flight would make huge advancements in the overall profitability of conducting research on suborbit and low-Earth orbit payloads; and